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EXAMINER

LERNER, MARTIN

ART UNIT

PAPER NUMBER

2654

DATE MAILED: 04/29/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/676,348

Applicant(s)

BENNETT, STEVEN M.

Examiner

Martin Lerner

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 to 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 to 5, 8, 10 to 14, 17, and 19 to 26 is/are rejected.
- 7) Claim(s) 6, 7, 9, 15, 16 and 18 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 September 2000 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1)<input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2)<input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3)<input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | <ol style="list-style-type: none"> 4)<input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____. 5)<input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6)<input type="checkbox"/> Other: _____. |
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DETAILED ACTION

Drawings

1. The drawings are objected to because they are informal. The hand lettering and hand numbering of the informal drawings render it more difficult to understand the invention. Formal drawings are requested.

Specification

2. The abstract of the disclosure is objected to because it contains more than 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 19 to 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding independent claim 19 and claim 24, the term "the PIM database" lacks antecedent basis and is unclear. The Specification does not say what "PIM" is an abbreviation for. Nor would one having ordinary skill in the art know what "PIM" is referring to. Thus, the scope of these claims is unclear.

Regarding claim 24, it is unclear whether the term "includes" implies that every one of the e-mail information, voice mail information, calendar information, and location information are contained within the PIM database, or whether only any one of these elements is contained within the PIM database. The term "includes" generally is taken to imply that all of the enumerated elements are present, but it is unclear whether that is what Applicant intends here. Thus, the scope of the claim is indefinite.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3, 4, 8, 10, 12, 13, 17, 19, 21, 23, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by *Kuhn et al.*

Regarding independent claims 1 and 10, *Kuhn et al.* discloses a method and computer program, comprising:

"receiving digitized voice data from a user" – speech input supplied through microphone 26 is first digitized (column 3, lines 66 to 67: Figure 2);

"processing the voice data to determine one or more phrases recognized as the digitized voice data provided by the user based on a currently active recognition

grammar" – the output of speech recognizer module 40 is supplied to the natural language parser 42 working in conjunction with a set of goal oriented grammars 44 (column 3, line 66 to column 4, line 10: Figure 2); in some instances, the natural language parser will immediately identify a program the user is interested in watching, but in other instances, there may be multiple choices or possibilities (column 4, lines 38 to 54: Figure 2); the set of grammars have context-sensitive grammar rules for each topic, e.g. grammar A 240 and grammar B 242 ("a currently active recognition grammar") (column 6, lines 50 to 65: Figure 4);

"when one or more phrase is recognized as the digitized voice data provided by the user as a result of voice-recognition uncertainty, using user-specific context information to choose a recognized phrase from the one or more phrases recognized as the digitized voice data" – automatic speech recognition process block 217 generates word confidence vector 268 which indicates how well words in input sentence 218 were recognized ("voice recognition uncertainty"); dialog manager 130 generates dialogue context weights 269 by determining the state of the dialog by asking the user about a particular topic; due to this request, dialog manager 130 determines what the user said (column 7, lines 18 to 29: Figure 4); the dialog manager has a user profile data store 56, which stores information about the user's previous information selections; thus, this data store helps the dialog manager tune its prompts to best suit the user's expectations (column 4, lines 48 to 54; Figure 2); N-best processor 270 selects the highest-scoring candidate as what the user intended (column 7, lines 59 to 64: Figure 4); the claim

limitation does not exclude additionally obtaining “user-specific context information” via dialog prompts.

Regarding independent claim 19, *Kuhn et al.* discloses a system, comprising:

“a voice interface to receive digitized voice data from a user” – speech input supplied through microphone 26 is first digitized (column 3, lines 66 to 67: Figure 2);

“a voice recognition engine processes the voice data to determine one or more phrases recognized as the digitized voice data provided by the user based on a currently active recognition grammar” – the output of speech recognizer module 40 is supplied to the natural language parser 42 working in conjunction with a set of goal oriented grammars 44 (column 3, line 66 to column 4, line 10: Figure 2); in some instances, the natural language parser will immediately identify a program the user is interested in watching, but in other instances, there may be multiple choices or possibilities (column 4, lines 38 to 54: Figure 2); the set of grammars have context-sensitive grammar rules for each topic, e.g. grammar A 240 and grammar B 242 (“a currently active recognition grammar”) (column 6, lines 50 to 65: Figure 4);

“a database containing user context information” – the dialog manager has a user profile data store 56, which stores information about the user’s previous information selections; thus, this data store helps the dialog manager tune its prompts to best suit the user’s expectations (column 4, lines 48 to 54; Figure 2);

“a user context natural language processor having a capability to select user-specific context information from the PIM database and use the user-specific context

information to choose a recognized phrase from the one or more phrases recognized as the voice data when the voice recognition engine recognized more than one phrase as the voice data provided by the user” – the output of speech recognizer module 40 is supplied to the natural language parser 42 (column 3, line 67 to column 4, line 2: Figure 2); automatic speech recognition process block 217 generates word confidence vector 268 which indicates how well words in input sentence 218 were recognized (“voice recognition uncertainty”); the dialog manager has a user profile data store 56, which stores information about the user’s previous information selections; thus, this data store helps the dialog manager tune its prompts to best suit the user’s expectations (column 4, lines 48 to 54; Figure 2); dialog manager 130 generates dialogue context weights 269 by determining the state of the dialog by asking the user about a particular topic; due to this request, dialog manager 130 determines what the user said (column 7, lines 18 to 29: Figure 4); N-best processor 270 selects the highest-scoring candidate as what the user intended (column 7, lines 59 to 64: Figure 4); the claim limitation does not exclude obtaining “user-specific context information” via a dialog.

Regarding claims 3, 12, and 21, *Kuhn et al.* discloses remote control 10 and television 12 communicate wirelessly through radio frequency link (“a wireless communication network”) (column 2, lines 25 to 32: Figure 1); speech input supplied through microphone 26 is first digitized (column 3, lines 66 to 67: Figure 2); thus, speech input is received through microphone 26 as analog data, and converted to digital data via an analog-to-digital converter.

Regarding claims 4, 13, and 23, *Kuhn et al.* discloses remote control 10 has microphone 26, where a user speaks into microphone 26 on remote control (column 3, lines 8 to 17: Figure 1); remote control 10 and television 12 communicate wirelessly through radio frequency link ("a wireless communication network") (column 2, lines 25 to 32: Figure 1).

Regarding claims 8, 17, and 25, *Kuhn et al.* discloses the N-best candidates are selected utilizing the contextual information by the parsing algorithm (column 6, lines 25 to 29: Figure 4); the N-best processor 270 selects the N-best candidates based on scores ("a confidence value associated with each of the N-phrases") (column 7, lines 59 to 64: Figure 4).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 5, 11, 14, 20, 22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kuhn et al.* in view of *Goldberg et al.*

Concerning claims 2, 5, 11, 14, 20, and 22, *Kuhn et al.* discloses speech recognition for wirelessly linking a remote control 10 with a television 12 to allow a user to select a television program, but omits a speech recognition system for receiving

analog voice data from a public switched telephone network and converting the analog voice data to a digital format. However, it is well known that speech recognition systems commonly operate over public switched telephone networks. Specifically, *Goldberg et al.* teaches a similar N-best speech recognition method over network 20, which can be a Public Switched Telephone Network ("PSTN") connected to a speech recognition system 90 through an A/D converter 50. (Column 2, Lines 5 to 26: Figure 1) Thus, speech recognition system 90 receives an analog voice signal from telephone 10 over Public Switched Telephone Network 20, and the analog voice signal is converted to a digital format by A/D converter 50. *Goldberg et al.* suggests that by extracting telephone call parameters, analogous to a user profile, to recognize the speech signal by an N-best system, the recognition accuracy can be improved without requiring additional user input. (Column 1, Lines 35 to 54) It would have been obvious to one having ordinary skill in the art to substitute a Public Switched Telephone Network as suggested by *Goldberg et al.* for the wirelessly linked remote control system of *Kuhn et al.* in order to improve recognition accuracy without requiring additional user input for N-best speech recognition received over common telephone handsets.

Concerning claim 24, *Kuhn et al.* discloses user context information as the user's previous information selections stored in user profile data store 56 (column 4, lines 48 to 54: Figure 2) and user responses to dialogues (column 7, lines 17 to 29), but omits user context information including e-mail information, voice mail information, calendar information, and location information. However, *Goldberg et al.* teaches a similar N-best speech recognition system, where a telephone call parameter ("user context

information") is extracted to generate a probable word set, and the telephone call parameter can be from where the telephone call originated ("location information"), time of day, or date with respect to date of departure ("calendar information") (column 1, lines 35 to 50; column 2, line 62 to column 3, line 32). (It is presumed that the claim limitation term "includes" implies any one of the enumerated alternatives.) *Goldberg et al.* suggests that by extracting telephone call parameters, analogous to a user profile, for recognizing the speech signal by an N-best system, the recognition accuracy can be improved without requiring additional user input. (Column 1, Lines 35 to 54) It would have been obvious to one having ordinary skill in the art to extract calendar information or location information as suggested by *Goldberg et al.* for the user profile data of *Kuhn et al.* in order to improve recognition accuracy without requiring additional user input for N-best speech recognition.

Allowable Subject Matter

9. Claims 6, 7, 9, 15, 16, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claim 26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

McDonough et al., Vanbuskirk et al., Stanford et al., and Karaorman et al. disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (703) 308-9064. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML

4/26/04

Martin Lerner
Martin Lerner
Examiner
Group Art Unit 2654